ELECTRONIC INTEGRATED SYSTEMS MECHANIC WG-2610-11

UTILITIES ELECTRICAL

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JOB SUMMARY

This position is located in the Facilities Management Division, Utilities Branch, Electronic Section, Public Works Department, Naval Air Station, Lemoore, CA. Duties include analysis and alignment of multisystem complexes. The incumbent performs all repairs, calibrations, preventive maintenance to all electronic multiple integrated systems, hydro/pneumatic instrumentation, controls, monitoring and necessary equipment.

TYPICAL WORK PERFORMED

Works under the guidance of a senior journeyman. Installs, performs trouble analysis and alignment and makes complete repairs to circuitry, modules and equipment, of multisystem complexes, consisting of numerous integrated systems that accomplish functions, such as, analog encoder/decoder multiplex systems, analog fuel gauging systems, variable frequency pump drive systems; with analog command and protection features; process control instrumentation, electro/mechanical dosage and analyzing systems, electronic/sonic gauging and metering instrumentation, digital timing devices, and function programing systems, optioelectronic integrator and analyzing equipment. Makes functional tests, evaluates operational characteristics of the intergrated systems by observing and analyzing wave forms, voltage, current power indications, logic information, and pneumatic valves, for repairs and calibration. Reviews and analyzes data, devises own criteria for tests, troubleshooting techniques, repair procedures, as manufacturers' information very vague. Must update components if found to be inferior in manufacturing and reliability.

Required to keep abreast of newest methods in electronic installation and diagnostics. Will provide assistance to the operating group in setting of various controls for positive results. Keeps in stock critical spare parts on hand for insurance against interrupted service. Incumbent will be required to use complex test equipment such as dual trace oscilloscopes, Q meters, deviation meters, pulse generators, frequency/audio signal generators, logic status testing devices, special manufacturers electronic and pneumatic calibrating equipment, and other instruments needed to perform electronic/pneumatic tasks.

SKILL AND KNOWLEDGE

The electronic integrated system mechanic requires exclusive practical ~~knowledge of the theories~~ and practices of electronic circuits, computer theory, hydro/pneumatic control and power systems. Ability to repair, overhaul, rebuild, align and adjust complete multisystems, such as frequency mudltiplexing, time division multiplexing systems, process control instrumentation, analog fuel gauging systems, variable frequency pump drive systems, chemical feed and analyzing systems. A minimum of two (2) years of practical experience, a certified copy of completion as an apprentice or equal, and have completed courses in electronic theory and mathematics. Ability to interpret drawings and operational manuals and make up own diagrams.

RESPONSIBILITY

The electronic integrated system mechanic will be under the administrative supervision of the Electrician Foreman. Incumbent has complete responsibility for maintenance and repair of all electronic, pneumatic, and electrical equipment as he receives technical guidance for his wage leader. Will provide technical assistance as required. His w~~o~~rk is reviewed in terms of over all results achieved i.e., compliance of finished product with durability and accuracy requirements.

PHYSICAL EFFORT

Must be physically capable of handling weight up to fifty (50) pounds. There is considerable amount of walking, stooping, standing on concrete decks, working off of step stools and ladders, and eye fatigue from component repair through magnifying glass/lens.

WORKING CONDITIONS

Will be exposed to toxic, poisonous gases, caustic and acid solutions. Protective clothing shall be worn at times needed when working in and around chemicals, and will be exposed to high voltage electricity, and voltages as applied in the performance of electronic tasks.

Exposed at times to temperatures up to 125 degrees F for short durations. Nuisance noise from inverter drive modules. Tasks will be performed inside and outside of buildings. Inside is totally enclosed. Will be exposed to various weather conditions.